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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/664,635

09/18/2003

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FUJY 20.628

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EXAMINER

HOANG, HIEU T

ART UNIT

PAPER NUMBER

2152

MAIL DATE

DELIVERY MODE

07/01/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/664,635	<b>Applicant(s)</b> NAKAMURA, MITSUHIRO	
	<b>Examiner</b> HIEU T. HOANG	<b>Art Unit</b> 2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/27/2007</u> .  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/16/2008 has been entered.
2. Claims 1-5 and 7-10 are pending.

### ***Response to Arguments***

3. Applicant's arguments have been fully considered but they are moot in view of new ground of rejection.

### ***Claim Objections***

4. Claim 4 is a duplicate of claim 5. It is suggested that applicant cancel claim 4.
5. Claim 9 depends on itself.
6. Correction is required.

### ***Claim Rejections - 35 USC § 101***

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 4, 5, 7-9 are rejected under 35 U.S.C. 101 the claimed invention is directed to non-statutory subject matter. The claims are system claims. However, the reservation setting module and the reservation path re-allocating module are best understood as software modules for carrying out steps, given that no explicit hardware embodiments of these modules can be found in the specification. Therefore, the claims are directed to non-statutory subject matter.

***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim recites “the link that tends to cause...” It is vague how to determine that a link tends to cause... as claimed since “tend to” has a relative meaning.

***Claim Rejections - 35 USC § 103***

11. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

12. Claims 1-5, 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Szviatovszki et al. (US 6,956,821, hereafter Szviatovszki), in view of Pan et al. (Processing Overhead Studies in Resource Reservation Protocols, hereafter Pan).

13. For claim 1, Szviatovszki discloses a resource management method for managing resources in a label switching network, comprising:

retaining session data including bandwidth ensured by reserved sessions which have respectively completed a reservation of a requested bandwidth (col. 3 lines 17-20, an established label switch path (LSP) with reserved bandwidth, col. 8 lines 34-40, reserved bandwidth) and bandwidth occupied by an on-communication session (fig. 3, step 36, available bandwidth is total bandwidth available after excluding occupied bandwidth by on-communication sessions, col. 8 lines 34-40); and

executing re-allocation of each path employed by each of the reserved sessions with respect to the bandwidth ensured by the reserved sessions based on the retained session data (col. 3 lines 22-31, pre-empted established LSPs are reallocated or rerouted according to the reversed LSP bandwidth).

Szviatovszki does not disclose periodical re-allocation.

However, Pan discloses the same (section 2.4, lines 5-13, page 5, if...else, if a resource reservation attempt is failed (not available bandwidth to fulfill a reservation request), retry resource reservation at each refresh cycle, "after a

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flow...while...do...return”, reservable resource is recalculated and reallocated to flows in the queue) based on the reserved session data (section 2.2, par. 2, saved flowspec.)

It would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Szviatovszki and Pan to retry resource reservation after a failed attempt.

14. For claim 2, Szviatovszki further discloses recording a failure count, for a fixed period, of a link causing a failure in a reservation request in a previous period; and fluctuating a weight of the link that tends to cause the failure based on a history of the failure count (Pan, page 4, last 3 lines, suspend misbehaving flows, flows that have failed their end-to-end reservation attempt too many times are ignored by routers, leaving resources for other flows, meaning the weight of a flow (priority of the flow) is changed according to its reservation failure counts).

15. For claim 3, Szviatovszki further discloses fluctuating a re-allocating period of the path in accordance with the reservation request failure count (Pan, page 5, par. 2, page 8, table 1, retry interval is based on number of reservation request failure count).

16. For claim 5, Szviatovszki discloses a reservation path optimization system for optimizing a reservation path between specified nodes configuring a network, comprising:

a reservation setting module for setting reservation paths and bandwidth for establishing sessions between specified nodes (col. 8 lines 28-48, LSP path and bandwidth settings); and

a reservation path re-allocating module for re-allocating each of the reservation paths which has been already set by said reservation setting module based on the bandwidth which have been already set by said reservation setting module except bandwidth occupied by an on-communication session (col. 3 lines 22-31, pre-empted established LSPs are reallocated or rerouted according to the reversed LSP bandwidth).

Szviatovszki does not disclose periodically re-allocating.

However, Pan discloses the same (section 2.4, lines 5-13, page 5, if...else, if a resource reservation attempt is failed (not available bandwidth to fulfill a reservation request), retry resource reservation at each refresh cycle, “after a flow...while...do...return”, reservable resource is recalculated and reallocated to flows in the queue) based on the reserved session data (section 2.2, par. 2, saved flowspec.)

It would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Szviatovszki and Pan to retry resource reservation after a failed attempt.

17. Claims 4 and 10 are rejected for the same rationale as in claim 5.

18. For claim 7, Szviatovszki-Pan further discloses the reservation path re-allocating module periodically re-allocates each of the reservation paths based on a specified

algorithm (Pan, page 5, reallocating based on number of failure retries and renewed bandwidth).

19. For claim 8, Szviatovszki-Pan further discloses a module for fluctuating the period (Pan, section 2.4, par. 3, retry period is not necessarily fixed).

20. For claim 9, Szviatovszki-Pan further discloses the label switching network is an MPLS network, and the reservation paths are Label Switched Paths (Szviatovszki, fig. 5, LSP, MPLS).

### ***Conclusion***

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hieu T. Hoang whose telephone number is 571-270-1253. The examiner can normally be reached on Monday-Thursday, 8 a.m.-5 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.



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HH

/Bunjob Jaroenchonwanit/  
Supervisory Patent Examiner, Art Unit 2152